

For Sir Benjamin Brodie B¹⁰
with the Author's respect

*Presented to St George's Hosp. Library
By Sir B. Brodie*

ABSTRACT OF CASES

IN WHICH A

PORTION OF THE CYLINDER

OF THE

INTESTINAL CANAL,

COMPRISING ALL ITS COATS,

*Has been discharged by stool, without the continuity of the
canal being destroyed.*

BY DR WILLIAM THOMSON.

(From the Edin. Med. and Surg. Journal, No. 125.)



IN proposing to lay before the Society a new example of a portion of the intestinal canal being discharged by stool, which occurred some years ago in the practice of Mr Cunningham of Tra-
nent, and was communicated by him to my father, I was naturally led to inquire in what respects this case corresponds with or differs from other similar cases that have been put upon record. Having, with this view, made a collection of such cases, so far as the works in which they are recorded, were within my reach, I had the satisfaction to find that they constituted collectively a series of great interest—both as regards the symptoms that manifested themselves during life, and the morbid appearances found in those who died at a longer or shorter period after the discharge of the portion of bowel. As I am not aware that any attempt has been made in this country,* to bring these cases together, or to state the general conclusions to which they lead, respecting this singular example of the *vis conservatrix naturæ*, I trust an attempt of the kind may prove acceptable to the profession.

The cases which I have collected amount to thirty-five in number. Of these I have made a threefold division. The first series comprehends those in which the patients were alive at the time of their cases being published. Of these there are sixteen. We have not in some of them precise information as to the length of time that had elapsed from the discharge of the portion of bowel, but in all, with one exception, (case 17,) the interval had been long enough to establish the fact of the injury which the intestinal canal had sustained being at least temporarily repaired. In the second series, consisting of four cases, death had occurred previously to their publication, but unfortunately no dissection had been made. In the third series, which comprises fifteen cases, death had also occurred, but in these an examination of the state of the parts within the abdomen had taken place.

It is not necessary at the present day to enter into any explanation as to the manner in which the continuity of the intestinal canal is preserved, at the same time that a portion of its parietes, of their entire thickness, is discharged. Every one is now aware that to the accomplishment of these ends, three circumstances are essential; 1st, The invagination of a portion of intestine; 2d, The detachment, by disjunctive absorption, of the invaginated from the containing portion of intestine; and, 3d, Simultaneously with this disjunctive absorption, the effusion of coagulable lymph round the edges of living intestine from which the separation of the portion about to be discharged is going

* In 1831, a thesis was published at Tübingen, under the presidency of my esteemed friend Dr H. F. Autenrieth, having the same objects as the following memoir. Of some of the cases narrated in that thesis, I have given a more circumstantial account, and I have added several to which no allusion is made in it, particularly cases in which a *post mortem* examination was made.

on, and such an advancement in the process of organization, in this lymph, as to give it sufficient firmness to resist the physical impulses to which it may be subjected, by the passage of alimentary matters through it or from other causes. In the cases of Invagination on record, in which death has occurred without any portion of bowel being discharged, and in which dissection has taken place, we may trace, step by step, the successive stages of this singular process, by which nature effects a cure in circumstances of so threatening a character.

SERIES I. CASES in which death had not taken place at the period of their being recorded.

1. Joh. Pet. Albrecht de Intestinorum insigni per alvum excreta portione, superstite nihilominus manente aegroto. *Ephemer. Med. Phys. German. Decur. iii. An. iii. Obs. cxxix. p. 227.*

2. *Dissertatio qua pars Intestini Jejuni per guttus inferius excreta, salva manente aegri vita, describitur*, a J. Lembke et A. Westphal; Gryphiswald, 1741, in *Halleri Diss. Med. Pract. iii. 503. (No. 97.)*

3. *Recherches Historiques sur la Gastrotomie, dans les cas du Volvulus, &c. par M. Hevin; Mem. de l'Acad. Roy. de Chirurgie, xi. (12mo edit.) Observation par M. Sobaux, p. 338.*

4. Singular termination of a case of Enteritis, by Dr Thomas Sanden, Chichester. *Annals of Medicine for 1801, p. 293.*

5. History of the case of a man who discharged by the anus a portion of the Intestines full fourteen inches in length, by Mr John Bower of Doncaster. *Annals of Medicine for 1802, p. 345.* Preparation in the Anatomical Museum of the University of Edinburgh, I. 111.

6. Case of Intus-susceptio, which terminated favourably by the separation and discharge of the Cœcum, with a portion of the Colon and Mesocolon; by Mr J. M. Bowman, Ripon, Yorkshire. *Edin. Med. and Surg. Journal, ix. 492.*

7. Case of recovery after the separation and discharge by stool of a portion of the Ileum, by Alexander Renton, Surgeon, Pennicuik. *Edin. Med. and Surg. Journal. xiii. 447, and xvi. 156.*—Preparation in the Museum of the Royal College of Surgeons of Edinburgh.

8. *Sur un Iléus terminé par l'expulsion naturelle d'une anse d'Intestin grêle de dix-huit pouces de long avec le mésentère correspondant, et par la guérison parfaite; par MM. Tuilier et Cruveilhier. Bulletins de la Faculté de Médecine de Paris, 1818. No. 9. T. vi. p. 207.*

9. Case by M. Salgues. *Journ. de Medecine, xxxvi. 515, vide etiam Diss. In. Med. de Dejectione Portionis Intestino-*

rum per alvum, non semper mortifera, a Jos. Platz. Tubingen, 1831. P. 6.

10. Case occurring in the practice of Thomas Cunningham, Esq. Surgeon, Tranent; now first published. Preparation in the Museum of the Royal College of Surgeons of Edinburgh.

11. An account of a singular disease in the great Intestines, by Dr Baillie.—Med. and Chir. Trans. ii. 149.

12. Practical Observations on the Diseases of the Lower Intestines and Anus, by John Howship. P. 108.—Preparation in the Museum of the Royal College of Surgeons of Edinburgh.

13. Diss. sistens observationem Intestinorum partis intus-susceptæ et salva vita per anum dejectæ a Hedinger, Berolini, 1828; vide etiam Platz. (No. 9. cit.) p. 21.

14. Case quoted by Platz, p. 20, from Legoupil, Journ. Gener. de Medecine, Oct. 1820. I have not been able to discover the case in any journal of that period.

15. Case of Intus-susception, with sloughing of a large portion of Intestine, voided by stool. By Levi Gaylord, M. D. of Sodus, New York. American Journal of Medical Sciences, February 1830. See also London Medical Gazette, vi. 176.

16. Clinical Illustrations of the more important Diseases of Bengal. By William Twining, Calcutta, 1832. Obs. xxii. p. 92.

Series II. Cases in which death had taken place at the time of their being recorded, but in which no dissection had been made.

17. Georgius Francus de Frankenau, de Intestini tenuis parte per anum exclusa. Ephemer. Med. Phys. German. Dec. iii. An. v. et vi. Obs. clxxvii. p. 409.

18. Sur un homme qui a rendu a plusieurs reprises des portions d'Intestins par les selles; par M. Salgues, Chirurgien a Sens. Journal de Médecine, Chirurgie, &c. viii. 266, (1758.)

19. Fall, wo eine frau noch neun wochen den abgang eines beträchtlichen Darmstucks überlebte, vom H. D. Höflich in Gräfenberg. Horn's Archiv fur Prakt. Med. und Klinik, ix. 278. (1801.)

20. An Account, &c. by Dr Baillie. Vide opus, No. 11. cit. p. 144.

Series III. Cases in which death had occurred, and a *post mortem* examination been made.

21. Sur un fait très singulier par M. Majault.—Recueil

Periodique d'Observations (Journal) de Medecine, Chirurgie, &c. v. 427, (1756.)

22. History of a case of Ileus, in which a considerable portion of the Intestine was voided by stool, by Mr William Dougall, surgeon at Keith. Medical Commentaries, ix. 278.

23. Medizinische und Chirurgische Wahrnehmungen vom Prof. Schreger in Erlangen. Horn's Archiv. (vid. No. 19.) Gangraen des Darmkanals, p. 275.

24. Case by M. Mullet, in Bulletin des Sciences par la Société Philomathique, No. 46, iv. Année, Nivose An. ix. Vide etiam "Memoire sur une Terminaison particulière de la Gangrene dans les Hernies," by M. J. B. Cayol, in his translation of Scarpa on Hernia, p. 435.

25. Recherches Historiques, &c. par M. Hevin, (vid. No. 3.) Observation par M. Fauchon, p. 347.

26. Racconto di un fatto rarissimo, di considerevole porzione d'Intestino evacuato per secesso, anno 1805, Alessandria. Vide etiam Brizard, No. 30, citat. p. 7.

27. Remarks on Procidentiæ Ani, Intus-susceptio, &c. by Dr Alexander Monro, Primus, Phys. and Liter. Essays, ii. 353, and Works, p. 674. Case communicated by Dr Cullen.—Preparation in the Anatomical Museum of the University of Edinburgh.

28. Sur une portion d'Intestin entier dans tout son contour, de plus de quatorze pouces de longueur, rendue par le fonde-ment, par M. Guerin. Journ. de Medecine, Chirurgie, &c. xxii. 552. (1765.)

29. Sopra una singolare dejezione d'Intestino, Memoria del Sig. Caldani; in Memorie di Matematica e di Fisica della Soc. Ital. &c. xvi. parte ii. 82.

30. Traité d'Anatomie Pathologique par J. F. Lobstein, i. 146. vide etiam Considerationes de Intestinorum Invaginatione, a Joan. Brizard; Argentorati, 1822, p. 9.

31. Case of recovery from intus-susception, where fifteen or eighteen inches of the Ileum separated, and were discharged per anum, by F. Bush, Esq. in Med. and Phys. Journal, l. 468. (Dec. 1823.)

32. Observations Anatomiques sur les suites etranges d'un Volvulus, par M. Boucher, Médecin. Mem. de Mathem. et de Phys. présentés a l'Acad. R. d. Sc. par divers Savans, &c. T. viii. p. 601.

33. Description of the Preparations contained in the Museum of St Bartholomew's Hospital, part ii. Fourteenth Series, p. 84.

34. Exceedingly rare case of Intus-susception, wherein up-

wards of a yard of Intestine was removed. Lancet, ix. 813, under head of "St Bartholomew's Hospital."

35. Osservazioni di una Rottura singolare del tubo Intestinale con perdita di un pezzo d'intestino e successiva stabile unione della due estremità, in Memorie sopra alcuni pezzi Morbosi, conservati nel Gabinetto Patologico dell' Università di Padova. Di F. L. Fanzago.

SERIES I. CASE 1. A soldier, aged 40, having been thrown down and trampled upon by an adversary, complained, for some weeks, of most excruciating pains in the abdomen, and frequently experienced, during that time, most obstinate constipation. These symptoms, along with continued efforts to vomit, gave reason to apprehend the supervention of iliac passion. The pains were not alleviated by the remedies employed, and the patient appeared in a desperate condition, when suddenly diarrhœa came on, and he passed large quantities of mucous matter mixed with blood and sanies. This was again succeeded by obstinate constipation, and he felt that some foreign body was lodged in the rectum, which, with his utmost exertions, he was unable to evacuate. At last, when straining at stool, he perceived a small portion of substance protruding from the rectum, and laying hold of it, he succeeded, with the aid of the natural efforts, in extracting it, a considerable quantity of blood and matter being discharged at the same time. On examination this substance was found to consist of a portion of intestinal tube, more than a span in length, both the extremities of which showed evident marks of inflammation and gangrene. A portion of omentum adhered to it externally. On the internal surface at one extremity, was found the valve of Bauhin (*valvula coli*,) showing the part of the canal from which this portion of intestine had been separated. For the first three days, nothing was passed from the bowels but some purulent matter; but on the fourth, natural dejections were obtained. The patient gradually recovered, and resumed his military service.

CASE 2. A man, aged 35, living chiefly on a milk and acid diet, had been affected for four years with hard tumours about the umbilicus, which increased in size every year, and were accompanied with pains and with swelling of the feet. He was seized with putrid malignant diarrhœa, of which he took little care. On the 28th January he was found suffering under oppression at the præcordia, eructations from the stomach, burning heat, and spasms of the left side. There was copious evacuation from his bowels, of a brown colour and very bad smell. These symptoms more than once abated under the treatment pursued, but returned again with increased severity, the diarrhœa and pains of the left side being very severe. On the 1st of March, he passed a

portion of intestine, along with a quantity of thin matter of a brownish red colour, and putrid smell. At the end of four days, after having suffered excruciating pains, he voided shreds of intestine in a putrid state. After this the pains abated, and the belly always continued loose.

On examination of the discharged portion of intestine, the muscular coat was distinctly seen, with its circular fibres and intervening blood-vessels. On its inner surface, a number of *valvulæ conniventes* and of miliary glands were observable. A portion of mesentery adhered to its side.

CASE 3. A man, whose age is not mentioned, was attacked some hours after supper, with violent vomiting, followed by fever, painful swelling in the epigastric and umbilical region, and obstinate constipation. These symptoms advanced; the matters which he vomited became fetid; he had shiverings, convulsive motions in all his limbs, and extreme debility, with continuance of the most excruciating pains in the abdomen. Some remedies prescribed the tenth day of the disease seemed, after two days, to produce an abatement of the symptoms, but the vomiting, though less frequent, was always accompanied with violent griping. When seen some days after this, his pulse was small and contracted; his room was infected with a cadaverous smell; his voice was nearly gone; he had cold sweatings, hiccup, and cold feet. Half an hour before each attack of vomiting, he was seized with the most violent pain in the umbilical region, accompanied by spasmodic constriction; but his eyes were lively, his countenance of good colour, he was in possession of his senses, and of good courage. Remedies were administered, which by the second day produced some black and fetid stools, and cessation of the vomiting, and on the third day caused an evacuation of an astonishing quantity of putrid matters. The patient felt better, but the vomiting and pains returned some days afterwards. The remedies being continued, on the next day the gripings were very violent; the patient seemed near his end, when being at stool he suddenly passed a large portion of solid matter, which proved to be a portion of colon, twenty-three inches in length, with the part of the meso-colon to which it was attached. He continued very emaciated for some time, but ultimately regained flesh and strength, so as to serve in the militia.

CASE 4. A man, aged 23, of rather spare and thin habit, but extremely healthy, was seized on a sudden with violent pains in the bowels and sickness. On the evening of the fifth day, the pain was extreme, seated principally between the umbilicus and the pubes, but extending in some degree towards the right iliac region; the belly was tense, extremely tender to the touch, and hotter than the rest of the body. There had been no proper alvine

evacuation from the time of the attack, but several times a large quantity of matter, not distinguishable from liquid feces, had been vomited. In the night between the eleventh and the twelfth day a very copious and effectual evacuation by stool took place. From this period all the symptoms appeared to subside. The vomiting became less frequent, and at length ceased altogether, and the soreness, tension, and heat of the belly abated. Watchfulness, restlessness, frequency of the pulse and thirst remained, till the seventeenth day, when the patient was well enough to be removed to a distance of two or three miles. On the eighteenth day he passed by stool a substance, which on careful examination was found to be a portion of small intestine, measuring in its whole length at least twelve inches. The separation had taken place very obliquely at one end, and somewhat obliquely at the other, so that in the part discharged, the intestinal tube was complete for the space of only about five inches. To this a portion of mesentery was attached. The discharged intestine was every where firm in its texture, and differed from its natural state only in being of a darker colour. The edges where the separation had taken place were ragged and irregular, and in some parts, to the length of an inch or two, were thickened into a whitish fleshy substance, of firm consistence. Within the intestine, a seed of an orange was found. The patient recovered, but no particulars are given respecting his subsequent state.

CASE 5. A man, aged 40, over whose body the wheel of a stage-coach had passed, complained, when seen soon after the accident, of great pain in the abdomen, across which, between the navel and pubes, was the mark of the wheel. In the course of a fortnight he was able to walk about a little. He then complained of a weight at the navel. On the 17th day after the accident, in the evening, whilst sitting by the fire, he was seized with a feeling of general debility, which continued for ten minutes, and returned the next night. On the following morning he voided *per anum* full fourteen inches of his intestines, being apparently a portion of the ileum, with a part of the mesentery adhering to it; after which he had a lax stool, more in quantity than he had got quit of at one time since the accident. At the end of two or three weeks, a tumour appeared below the navel, which burst in a few weeks, and discharged a large quantity of yellowish matter, having a faint smell of feces. Subsequently three or four other small tumours appeared at different times and broke, leaving five orifices, two of which continued open several years afterwards, with constant discharge of yellowish or brownish matter, and frequent emission of fetid wind. This patient gradually recovered, so as to enjoy a tolerable state of health.

CASE 6. A girl of 11 years, became affected with pain and sense of oppression in the bowels, with quick pulse, furred tongue, dry skin, and moderate thirst. On the 6th day hiccup and vomiting of feces occurred, the countenance was ghastly, the pulse quick and feeble, and there was every symptom of approaching dissolution. In the evening, a portion of the colon, cœcum, and mesocolon, measuring $13\frac{5}{4}$ inches, was passed by stool, with much black and fetid feculent matter, to the amount of six quarts,—this being the first proper alvine discharge from the commencement of the disease. Next day, the thirst was moderate, the skin moist, appetite returning, abdomen free from pain; and from this period the patient continued to recover gradually, and ultimately regained, to all appearance, perfectly good health.

CASE 7. A man, aged 45 years, was suddenly seized, whilst at work, in the course of which he had been raising several heavy weights, with pyrosis and pain in the left hypochondrium, with a violent drawing in of the bowels, followed by a sensation as if some portion of them was squeezed and constricted. He procured a motion at this time, but without relief. Notwithstanding the free use of purgatives, it was not till the morning of the fourth day that the bowels were again moved, when nearly eight pints of dark-coloured bloody excrementitious matter were discharged by stool. He now felt much relieved,—the ease that followed the evacuation being almost as sudden as the pain in the commencement of the attack had been. He continued to improve till the morning of the fourteenth day after the discharge, when he became restless, and all the former symptoms recurred in their most aggravated form. In this state, he continued for three hours, racked with violent bearing down pain, and endeavouring, by straining, to expel something from the bowels that required all his efforts. From this distressed state he was as speedily freed by the discharge of a portion of the ileum nearly 18 inches in length, with a considerable portion of mesentery attached to it. He fell immediately into a profound sleep, and from that time gradually recovered so as to be able to resume his usual employment. At the end of three years, the digestive organs had completely recovered their natural functions, and the lankness of body under which he had laboured was entirely removed; and at the present period (12th August 1835,) after an interval of nineteen years, I am informed by Mr John Renton, surgeon, of Pennicuik, by whom the case was published, that he is still alive, and supports himself by his daily labour, having been for many years restored to his usual state of health and appearance. “He still resides,” adds Mr Renton, “in the village of Roslin where I attended him when he was ill.”

CASE 8. A man, aged 37, not subject to colic, diarrhœa, or constipation, was seized, without any known cause, with slight colic, which was easily subdued. On the 6th day, the colic recurred in a more severe form, but again yielded to treatment. On the 8th day, in consequence of an appearance of derangement of the stomach, an emetic was administered, which produced many attempts at vomiting, but little was ejected. On that evening the vomiting recurred spontaneously, continued the whole night, and was accompanied with hiccup. On the 9th day fecal matter was vomited, with some *ascarides lumbricoides*. The hiccup continued, the belly was in a state of meteorismus, and painful, particularly on pressure; he was sleepless and delirious, had no stools, and the urine was scanty and turbid. By enemata, a small quantity of blackish matters resembling decomposed blood was brought away. The symptoms continued the same till the 14th day, when being in the bath, he had copious spontaneous stools, with obvious relief; with diminution of the hiccup and vomiting, and of the abdominal tension and tenderness. The alvine evacuations were discharged in large quantity, and very fetid, with continued improvement in the patient's condition. On the twentieth day he passed at stool a portion of the small intestine, eighteen inches in length, with its corresponding portion of mesentery. On the following days there was a considerable dejection of matters resembling shreds of intestines, (*raclures de boyaux*,) with twitches in the bowels, which lasted only a few moments. These pains gradually diminished, concentrated themselves at a fixed point below the umbilicus, and appeared only during digestion, being the more severe the larger the quantity of food the patient had taken at a meal. By the 26th day after the discharge of the portion of bowel, he is described as having regained his appetite and strength, and as having an alvine evacuation only once in the twenty-four hours; the belly as being soft, and the pains during intestinal digestion as having almost entirely disappeared.

CASE 9. A man, aged 24, was seized with severe vomiting and griping, so as to throw up every thing he took. When seen twelve hours after the commencement of his attack, his countenance was collapsed and flaccid, but there was no particular change observable in his eyes. There was no fever. An oil injection having been administered, a large evacuation took place, and the gripings and vomiting diminished. On the third day he was at work again in the fields; but three days afterwards he was attacked with vomiting more severe than before, and brought up several worms; the pains in the belly also again recurred. When the belly was examined it was found slightly tense and painful; and in the epigastric region and

around the umbilicus, there was an oval swelling, larger and longer than a turkey's egg. The pulse was very small and feeble; but in two days it increased so much as to indicate venesection. Clysters having been administered, a large quantity of bilious matters was discharged, but the uneasy symptoms were not thereby lessened till about the thirteenth day, at which time also the vomiting recurred only every third or fourth day. On the twenty-third day, the vomiting seemed to have entirely ceased, the belly being only slightly inflamed, but the tumour continued painful. After an attack of indigestion, vomiting, tension, and inflation of the abdomen came on, accompanied with great difficulty in voiding urine; but at the end of four days, these symptoms subsided; the vomiting ceased, and the part occupied by the tumour was the only painful part, and even in it the pain was but slight. On the forty-first day, the whole cœcum with its appendix was discharged from the bowels in gangrenous fragments. The tumour disappeared, and the patient recovered completely from the disease.

CASE 10. Extract of letter from Mr Cunningham to Professor Thomson, 13th September 1824. "The accompanying preparation is a portion of intestine, apparently of the ileum, passed during life by a woman about 40 years of age, under my care. I have had frequent occasion to see this woman for several years past, on account of stomachic ailments and great torpor of the bowels. When called to her on the 16th May 1822, I found that she had been complaining for some days previously of retching and pain of the abdomen, accompanied with costiveness. At that time she felt a severe pain a little above the pubes, inclining to the left side. She could not bear pressure, had constant vomiting, and had had no stool for some days. Her pulse was rather full. I took from her twenty-five ounces of blood. Laxative glysters were administered, as well as a variety of laxative medicines. The bleeding was repeated on the 17th, and the laxative medicines continued. She was put into a warm bath, and fomentations applied to the abdomen. These measures, along with frequent injections of the infusion of tobacco, and blisters to the abdomen, were persevered in for eight days before a stool was obtained. After this the bowels were moved frequently, and on the third day, along with a natural and wonderfully easy stool, she passed the accompanying portion of intestine. Her recovery went on very favourably, although she was obliged to take more fatigue than was advisable in her situation. She was restricted to the use of a spare diet, and her bowels were kept open by castor oil. She continued, however, to suffer considerable pain in the former seat of her complaint, for more than a year. Since that time she has been much better than could have been expected; does the duty of her family,

and now walks half a mile twice a-day. Her stools are irregular, frequently watery, never well-formed. Menstruation ceased for about ten months, but again returned. Her legs are a little œdematous." By a communication, dated 13th August 1835, with which I have been favoured by Mr Cunningham, I learn that this woman is still alive, after an interval of thirteen years—that she has ever since the date of his last communication respecting her enjoyed wonderful health,—and that, beyond an increased tendency to flatulence, she experiences no ailment or uneasiness.

CASE 11.—“ In Dr Hunter’s collection of anatomical preparations,” says Dr Baillie, “ there is a substance very much resembling gut, which had been discharged during a violent purging, and which I have examined very lately with attention. It is about six inches in length, and is not so distinctly marked in its organization as that described in the foregoing case; (*vide* Case 20,) but upon attentively looking at it, there can be discerned some muscular fibres, the remains of the *appendiculæ epiploicæ*, and a part of one of the longitudinal bands, which are the circumstances characterizing the structure of the great intestines. Accompanying it there is a considerable portion of the inner membrane of the intestine, covered with a layer of coagulable lymph, which had been separated and discharged by stool. The person from whom this portion of gut passed away lived two years afterwards; but the particulars of his case have not come to my knowledge.”

CASE 12.—A young man, in February 1818, after labouring under all the severe symptoms of true ileus, with great danger to his life for eleven days, passed by stool a large mass of a solid substance, which proved to be a portion of intestine, partly inverted, measuring nearly thirty inches in length; after which the patient perfectly recovered.

CASE 13. A woman, who in her 49th year, passed through typhus fever, was subsequently for several years subject to frequent attacks of spasmodic pains in the abdomen, particularly in the epigastric region, with vomiting or acid eructations and much flatulence. In her 56th year, she was suddenly, without any known cause, attacked with griping in the right hypochondriac region, which gradually extended, and at length occupied the whole epigastric region. The patient now felt as if a cord were tied firmly round the belly. Respiration was difficult, anxious and frequent, the severity of the pains impeding full inspiration. At the same time the whole tract of the intestines was in a state of violent motion, producing the feeling of balls of the size of the fist; but these, when pressed upon, moved about from place to place. The patient was found prostrate on the ground, suffering most excruciating pains, and beating the ground with

her hands and feet. The whole body was of an icy coldness, and covered with a cold sweat. The hypochondriac region was very much constricted. Vomiting came on, by which the contents of the stomach, and afterwards a greenish yellow matter was ejected. Very severe and almost perpetual tenesmus supervened without any alvine evacuation. These symptoms continuing for three days, the patient seemed in imminent danger. The face was collapsed and covered with a cold clammy sweat. Respiration was very difficult; the pulse thread-like, beating 150 times in a minute; the voice weak and languid; and there was stercoraceous vomiting. The abdomen was drawn upwards from the left to the right side, and there was a tumour of the size of the fist in the epigastric region, which on the right side reached the iliac, and on the left, disappeared in the hypochondriac region. The rest of the abdomen was hollow. On the 7th day of the disease she passed by stool a part of the small intestine forty inches in length, and having a considerable portion of mesentery attached to it. There were obvious marks of inflammation, exudation, and sphacelus on the discharged portion of intestine. After this evacuation, the state of the patient was immediately improved. The abdomen was indeed somewhat painful on the following day, but admitted of being more forcibly pressed upon. The tumour in the epigastric region had disappeared. The patient recovered so speedily that on the fourteenth day from the commencement of the disease she was able to leave her bed.

CASE 14. A boy, aged $4\frac{1}{2}$, affected with small-pox, discharged by stool the whole of the cœcum with its vermiform process, and likewise a part of the ileum, six inches, and a part of the colon four inches in length. In a short time he recovered his health.

CASE 15.—A boy, about 6 years, when first seen, was affected with symptoms not indicating a very severe attack; and a cathartic which was administered operated readily, and with apparent efficacy. On the following day he began to complain of pain in the bowels, attended with considerable fever, which continued with increasing severity for two or three days, until nausea, stercoraceous vomiting, and the usual symptoms of the most obstinate constipation, or intus-susception, distinctly manifested themselves. The acuteness of the pain, the intensity of the heat, together with the quickened pulse, reddened, shrivelled, dark-furred tongue, and great prostration of strength, left scarce a shadow of hope that the termination of the case could be favourable. In about four or five days, however, an evacuation was procured of a dark briny appearance, somewhat of an indigo tinge, which was followed by a speedy mitigation, and soon by an entire alleviation of all the alarming symptoms. This discharge was succeeded by one

or two others rather copious, and exhibiting nearly the same appearances. The evacuations soon became natural, the bowels open and regular, the febrile symptoms disappeared, the tongue cleared, the appetite returned; in short, the whole system appeared with unwonted rapidity to resume its ordinary functions, and place the patient in a most favourable and convalescent state. In little more, however, than two days from the opening of the bowels his symptoms were materially worse, and a portion of the intestines protruded in two doublings or folds of several inches in length. Most of the intestine thrust out was in a state of incipient mortification; a part more advanced in the putrefying process; whilst other portions exhibited a nearly natural appearance. In about twenty-four hours the protruded portion of the bowels sloughed off; it measured twenty-three inches in length, exclusive of about three inches contained in a fold, which adhered too firmly to be detached or extended.

After the separation of the detached portion of the bowels, passages were procured, though with considerable pain and difficulty. The evacuations put on much the appearance of the fermenting wash in a distillery. Digestion was very imperfect; emaciation, to an extent but rarely witnessed, ensued; and the assimilating powers of nutrition were so feebly maintained as to threaten life. In this state the patient continued with little alteration for several weeks. At the end of that time the pain, which had been pretty constant, gradually became periodical, until it assumed all the regularity of parturient pains, an interval, varying from five to fifteen minutes, occurring between the successive paroxysms. The voice also was precisely of that kind which distinguishes such pains, uttering those cries which indicate the most piercing distress. Each paroxysm lasted about a minute and a-half, and was succeeded by an interval of perfect ease. On the return of each pain, the abdomen, which before was jejune and contracted, suddenly grew distended and inflated, discovering through its thin parietes every movement and tortuous winding of the intestinal tube, each portion of which seemed endeavouring to force its way through the thin integuments that enclosed it, and exhibited a tympanitic hardness and tenseness seldom witnessed in the most obstinate diseases of that kind, but which instantly and entirely subsided in exact ratio to the pain. After resisting, during some weeks, every means of treatment employed, this troublesome and distressing symptom subsided under a mercurial course. Health was gradually restored, and about two years after the period of the attack, the patient was a tolerably healthy lad, though more than ordinarily subject to attacks of colic and other bowel complaints.

CASE 16.—A lad, aged 17, was seized three weeks after his

arrival in India with dysentery. When seen on the evening of the fourth day he was suffering from pyrexia, pulse 110, belly hard, flat, and inelastic; the region of the cœcum tumid, hard, and painful on pressure; he had frequent scanty evacuations of a bloody water, passed with great agony. The evacuations assumed the appearance of a black watery fluid, with horrid odour of putrid blood. On the eighth day, the tension and fulness at the cœcum, and over the right side of the lower belly, were greatly increased; the stools became scanty, in fact nearly suppressed, and they had a reddish tinge; the patient was weak and irritable, apparently sinking. On the ninth day there was a horrid putrid odour from the body; he had been seventeen times at stool during the last night, but the evacuations were extremely scanty, and not improved in quality. Through this day he had no stool and seemed easier. The pulse fell to 116, and the belly was less tumid. Two enemata, each produced a moderate fluid evacuation; his belly was becoming softer. On the following night he had seven calls to stool, voiding altogether not more than a pint of brown fluid with slight tinge of blood and less fetid; exhalation from his body less offensive; belly softer. On the morning of the tenth day, a tube of small intestine, five inches long, and some fragments of equal length, were passed *per anum*, with some pus and bloody ichor; the tube appeared to consist of the whole of the coats of the small intestine inverted, and on its surface some sloughing ulcers were very distinct. On the second day after this occurrence, he was much better, had three fluid light brown stools, the belly was soft and flat, a slight fulness in the cœcum remained. He had passed some more small portions of intestine. The remaining hardness of cœcum gradually subsided, and he was able to go on board ship on the twenty-first day after the discharge of the first portion of bowel, still very weak and emaciated, but having a good appetite, which it was difficult to restrain.*

* In enumerating the various appearances found on dissection in cases of Dysentery, Mr Twining says, in the work from which the above case is quoted, "The ulcerations within the great intestine are generally most numerous and most extensive at the cœcum and first portion of colon. The *valvula ileo-colica* has in some cases been found quite destroyed by ulceration, and the lower end of the ileum has formed an intus-susception into the cœcum, and becoming there strangulated has caused death. In a few more fortunate instances of intus-susception, when the lower portion of ileum descends into the cœcum, and forms a circumscribed tumour in that region, attended with suppression of stools and rapid pulse,—which prove the obstruction of the canal at that part,—the strangulated portion sloughs off, after adhesive union of adjacent parts has taken place, so as to maintain the continuity of the canal; and then stools are again passed, together with masses of slough, or entire portions of intestinal tube, and the patient slowly recovers. In eight years I can mention five cases of this sort, two of which have recovered."

In the "Catalogue of Preparations, &c. in the Museum of the Army Medical Department," I find the following entries: "Digestion, Div. iii. 53.—Portion of small intestine, about seven inches in length, voided *per anum*; the muscular fibres of the

SERIES II. CASE 17.—A man, aged 26, laboured for about fourteen days under continual fever, obstinate obstruction of the belly, and severe colicky pains, thirst, &c. By what cause this illness had been induced was not known. The disease becoming daily more severe, some violent purgative was administered, which produced two copious and painful stools, with large and continued bilious vomitings. The hypercatharsis could not be restrained, and a few hours before his death, whilst suffering severe pain in the epigastrium, and passing copious bloody stools, he discharged a portion of the small intestine. Though he felt relieved at the instant, he soon after experienced a severe fainting fit, and died convulsed. The portion of intestine was a span in length, and had a portion of the mesentery annexed to it. From the presence and particular appearance of the *valvulæ conniventes*, it was supposed to be the portion of the jejunum which terminates in the ileum.

CASE 18.—A lad of 15 years; when seen had for thirteen days been suffering intense pains in the abdomen, particularly round the umbilicus, and had vomited not only whatever he swallowed, but also stercoraceous matter. The abdomen was very tense and painful, particularly round the umbilicus; the fever was acute, and the patient inexpressibly restless, being unable to remain in any position. Proper treatment having been had recourse to, in the following night the vomiting ceased, the belly opened, the patient passed a quantity of very brown matter, of a fetid smell; the belly speedily collapsed, and the severe symptoms ceased. After this first evacuation, there came a second, in which he passed a portion of small intestine, twenty inches in length, gangrenous at its two extremities and in some parts of its parietes. On this portion of intestine being washed and air blown into it, the gangrene was found to have produced several small holes, through which the air escaped. The next day he again passed a portion six inches in length. After this he was unable to walk, unless in a semi-bent position, and suffered severe pain after meals, sometimes vomiting what he had taken. He neglected the rules of diet prescribed for him, and died of indigestion two months after his accident.

CASE 19.—A woman, aged 30, eight weeks after delivery, was seized suddenly, after much exposure to cold, with most violent pains in the region of the *os sacrum*, which shifted

gut distinctly visible. *Madras, presented by Mr Job, Surgeon 13th Light Dragoons. From John Seary of that regiment, who perfectly recovered, and passed through the Invalid Dépôt at Fort Pitt some years afterwards.*"

"Do. do. 99.—Portion of intestine passed *per anum*. *Madras, presented by Dr Strachan, Inspector-General of Hospitals. From Thomas Rickmore, 13th Light Dragoons.*" Were these cases of Dysentery?

to that of the stomach. In the evening she suddenly experienced an epileptic attack, which soon ceased, but recurred. The painful part round the stomach was much raised, whilst the rest of the parietes of the abdomen appeared spasmodically drawn in. On the second day, the pain in the region of the stomach continued, but extended farther around the umbilicus, and the belly was still drawn together. After wandering about between the abdomen and the *os sacrum*, the pain fixed itself on the third day in the region of the navel. The patient had occasional vomiting, when worms were discharged. The constipation continued, notwithstanding the employment of strong purgatives and clysters. On the 5th day, the abdomen was enormously swelled, the pulse small and contracted. In the evening there occurred smart purging, but this was not attended with any alleviation of the pain or diminution of the great swelling of the abdomen. Vomiting and hiccup occurred occasionally; on the eighth day the patient was much exhausted, and the intestinal canal so distended that externally one could very easily trace its convolutions. In the course of this night three stools were passed, with great alleviation of suffering and diminution of the abdomen. On the evening of the ninth day there were several very copious discharges from the bowels, which acted so beneficially, that by the tenth day the abdomen had completely subsided, and the pain had ceased. On the twelfth day, along with an evacuation, there was discharged a portion of intestine three-fourths of an ell in length, consisting partly of jejunum, and partly of ileum, coloured black on its inner surface, but otherwise uninjured throughout its whole length. A portion of omentum adhered to it. In a few days the patient was so far convalescent as to be able to rise and walk about her room. Symptoms of dropsy, however, soon manifested themselves, which increased by degrees, and cut her off at the end of the ninth week.

CASE 20.—A woman, aged 50, of a spare habit, and very subject to costiveness, had twice in her life been attacked with vomiting, violent pain in her stomach and bowels, and obstinate constipation. The attack of the disease, which proved fatal, began with violent pain of the stomach and bowels, more especially on the left side, accompanied with vomiting and obstinate costiveness. Evacuations from the bowels were procured by purgative medicines of considerable power. These stools at first had a fetid offensive smell; but after some time consisted merely of blood, and were very numerous for many days,—on some days amounting at least to forty. The blood evacuated from the bowels became at length mixed with a kind of watery fluid, exceedingly offensive to the smell, and what seemed to be mucus.

About three weeks before her death, she voided a substance resembling gut, above a yard in length. For ten days before the passing of this substance, and always after that time till she died, she could have no evacuation from the bowels, unless she was held up nearly in an erect posture. During a great part of the time that the disease lasted, the disposition to vomit was so constant that she could hardly keep any thing upon her stomach; but at length this symptom very much subsided. Within fourteen days of her death, the pain in her stomach and bowels also diminished, except on the left side, where it remained unabated.

The portion of gut, on accurate examination, proved to be a part of the colon. The inner membrane was clearly distinguished, having very much the same appearance which it has commonly in that intestine, and the circular muscular fibres were traced with the most satisfactory degree of distinctness. In some places the peritoneal coat was preserved; in others, the *appendiculæ epiploicæ*, and a part of the longitudinal bands were distinctly to be seen.

SERIES III. CASE 21.—A woman, aged 30, in the sixth or seventh month of pregnancy, was attacked with very violent colic, accompanied with fever, and vomiting of stercoraceous matter. Nothing was done for her till the eighth day, when she was found in a deplorable and desperate state. The same day, she passed by stool a portion of intestine, which Winslow on examination declared to be the cœcum and a part of the colon, with some portions of mesentery. The whole formed a packet extremely swelled by inflammation, black and gangrenous in several points, and particularly at the two extremities. The patient, who had continued up to that day to take solid food, passed by stool, during two or three days after the discharge of this portion of intestine, moulded excrements, surrounded by very fetid matters. She was brought to bed, on the twelfth day of her disease, of a still born and putrescent child. She sank on the fourteenth day.

On opening the body, the whole abdomen was found filled with purulent serum, in such quantity and so fetid, that the examiners had not the courage to prosecute their investigations.

CASE 22. A woman, aged 67 years, naturally strong and healthy, but in very low circumstances, and much reduced by scarcity of provisions, was seized with violent colic or ileus. Nothing relieved the vomiting, pain, and constipation. By the sixth day, hiccup had come on, with every symptom of approaching death. Some stools were at this time procured. Several days afterwards, when the use of all medicines was given up, a looseness came on naturally, which continued four or five days,

and relieved her of all threatening symptoms, excepting extreme debility. On the last day of this looseness, the seventeenth of her disease, she voided by stool a piece of the ileum, eighteen inches in length, along with its corresponding portion of mesentery. After this evacuation she became almost free from pain, but extremely weak, and lay continually in a supine posture, until a day or two before she expired, when she became very restless, and tossed much. She died on the thirty-sixth day from her first attack.

On dissection, many different parts of the intestines had a livid and almost gangrenous appearance, yet admitted of being blown up with air. A part of the ileum, about five or six inches, within a few inches of its termination in the colon, was found adhering so closely together as not to admit of separation. When the intestines were cut up, a very great constriction on the gut was discovered, where it appeared there had been an intussusception of the part carried off, a division of the gut, and an union of the two divided ends by inflammatory adhesion. The stricture at the union was such as only to admit the passage of a little finger with difficulty.

CASE 23. A woman, aged 48, subject from infancy to obstinate constipation, after stoppage of her bowels for five days, was seized (22d May) with the most violent pains in the abdomen and frequent vomiting. No relief could be obtained; the malady became more severe every day; she began to vomit feculent matter; the abdomen swelled immensely, became tense, and the pain was extreme. The right side from the hypochondrium to the groin was the hardest swelled and most painful, particularly in the latter situation. On the eleventh day (28th May) the whole of this surface began to assume a bluish red colour, and ultimately became blackish. About the thirtieth day (18th June) for the first time the bowels were again opened. A quantity of clayey excrement and mucus was discharged, and along with it a large portion of membranous substance, which on investigation proved to be a portion of intestine separated by gangrene. It was ten inches in length, preserved completely its cylindrical form, had a portion of mesentery attached to it, and was of a blackish gray colour. The patient survived twenty-nine days. (17th July.)

On dissection, the following appearances presented themselves. Almost the whole of the small intestines had coalesced along with the omentum into one mass. The situation of the transverse arch of the colon was very irregular, its middle part being so much pressed downwards and towards the right groin that it lay bent knuckle-formed upon the ileum, at the place where it enters the cœcum. This position of the colon, the author conceives,

must have existed for a length of time, and might perhaps have been an original malformation, and the cause of the obstinate constipation from which the patient had so constantly suffered. But the most intense traces of disease were visible on this depressed part of the colon, and the fold of the ileum lying below it. The colon was destroyed by gangrene for five inches in length throughout half of its circumference. The borders of the gap thus produced had adhered to the inner surface of the parietes of the abdomen, behind the inguinal region, so that these parietes replaced the deficient half of the cylinder of the intestine. In this way the continuity of the colon was in some measure restored, and a kind of pouch or reservoir formed in the inguinal region, which opened into the cavity of the colon. But into this pouch the extremity of the mutilated ileum likewise opened. For of the ileum no more remained as far as the valve of the cœcum, and it was obvious that what had come away with the evacuation from the bowels was a part of this intestine, which had been disjoined by gangrene. The aperture of the ileo-colic valve was entirely closed up by the adhesion of its lips.

It would appear, therefore, that the only way in which the excrements could pass from the small intestines to the rectum, was by their passing in the first place from the extremity of the ileum into the pouch or reservoir, and out of it, without going through the cœcum and the ascending colon, straightway into the transverse colon.

CASE 24. A woman, aged 56, was subject for a number of years to umbilical hernia, which had repeatedly produced unpleasant symptoms, and returned from the slightest causes, having been reduced more than a hundred times in the course of six years. On one occasion, the tumour was found larger than usual, and the patient affected with copious and frequent vomiting of feculent matters. The reduction could not be accomplished till after the application of poultices and embrocations for some hours. The symptoms continued, notwithstanding the return of the protruded parts, and on the following day the patient still discharged feces by the mouth as well as by stool. On the three following days the vomiting continued, but the matter vomited was only glairy. On the fifth day, the patient appearing more calm, was attacked with almost continual hiccup, sickness, and frequent syncope. On the eighth day, two gangrenous eschars formed about two fingers' breadth below the umbilicus, and a third upon the cicatrix of the navel. There was no stoppage of the alvine discharge, the patient going to stool daily. On the twelfth day the patient had a copious stool, in which was found a portion of intestine about fifteen or sixteen inches long, and accompanied throughout its whole length by a portion of mesentery almost unchanged. The patient continu-

ed to improve for about eighteen days, when she was attacked by a convulsive cough, accompanied with vomiting of glairy matter, which continued three days. An improvement again appeared, and continued about three weeks. Her appetite returned; solid food taken in moderate quantity passed readily; but liquids were almost always rejected by vomiting. During this period, the patient got out of bed, went twice into the open air, and felt very well. But on the sixtieth day of her disease, she had a return of the convulsive cough, with vomiting of mucus, which continued for three days. Having again become more calm, she was affected with frequent yawning, hiccup, and syncope, and at last died on the sixty-fifth day of her disease, and the forty-fourth after passing the portion of intestine by stool.

On dissection, the two extremities of the intestine were found completely united; they appeared to be each cut like the mouth of a flageolet, and accurately adjusted to one another in that direction. The point of union had contracted strong adhesions with the peritoneum, on the left side of the umbilicus, near the ring; nevertheless the cavity of the intestine was not sensibly contracted even at the place of the cicatrix. There was not the slightest trace of effusion of the contents of the bowels into the cavity of the abdomen. The portion separated belonged to the jejunum and ileum. The intestines were gangrenous at different points, at a considerable distance from the place of union. The liver was diseased.

CASE 25. A man, aged 48, entered hospital, on account of a violent colic, with frequent vomiting of stercoraceous matter. On the twenty-fifth day of his disease, he passed by stool the whole cœcum, with six inches of the colon and as much of the ileum. This expulsion was preceded by a considerable discharge of very fetid matter. On the tenth day after this the patient walked home about 1000 paces, but he died on the night between the thirteenth and fourteenth day.

On opening the body, the cœcum was found to be wanting; the ileum terminated in the colon, with which it was very firmly united; when this latter intestine was opened, a tumour an inch in length, containing a yellowish fluid, was seen near its new embouchure. On the psoas muscle, a little below the right kidney, was observed an abscess, which communicated by a sinus with the place at which the union of the separated portions of intestine had occurred.

CASE 26. A woman, aged 40, was seized with colic, bilious vomiting, and diarrhœa, the stools being mixed with clots of blood. After seven or eight days (27th June,) when at stool, she passed with much pain and uneasiness a solid body, which on examination proved to be a part of the colon and the cœcum

with its vermiform appendicula. On being visited somewhat more than a month afterwards (2d August) it was found that she still experienced pains in the bottom of the belly, that there was a hard and circumscribed tumour in the left iliac region, and that her pulse was very weak and frequent. She stated that after the discharge of the portion of bowel, she continued to suffer pain as before, but afterwards regained her health so much as to engage in work, and fifteen days previously had gone some distance to help in grinding corn, in consequence of which exertion she had suffered a relapse. She died on the forty-third day after the discharge of the intestine. (8th August.)

On opening the abdomen, nothing particular was observed till the omentum was raised, when two apertures were seen in the colon, one of which received the ileum with a great part of the mesentery. The omentum performed the part of an outer coat, so that the feces, from this aperture of the colon to the rectum where it adhered, had not escaped into the cavity of the abdomen. The rectum appeared as if filled with feces, but on being cut up, the ileum and mesentery, for a Parisian foot, were found pushed into the colon as far as the rectum.

CASE 27. A boy, aged 12, complained of wandering colic-pains, which he imputed to blows received on the belly from some of his companions. These pains returned frequently, with diarrhœa, and sometimes bloody stools, for nearly a year. At the end of that time, on being seen, he was much emaciated, had a quick pulse, and was so weak as to be confined to bed. Two weeks after this he passed at stool a livid membranous substance, tubular, and when distended with air, thirteen inches long, having the mesentery attached all along its concave side. Besides this large portion, there were several shreds and smaller pieces passed by the patient, notwithstanding which there were afterwards seen among his feces, skins of potatoes which he had eat after these parts of the intestine came away, so that they had not produced any discontinuity in the alimentary canal. The symptoms continuing, the boy died in six weeks.

On dissection, the folds of the intestines and omentum were all glued together by a fatty curdy matter. Within four inches of the valve of the colon, the ileum, formed into the usual curve by the mesentery, suddenly rose perpendicularly, and at that point it was much contracted, and had the appearance of a cicatrix. When the intestine was opened, this contracted part of it was found much thicker and harder than it was any where else, especially on one side, where it stood so far into the cavity as to leave a very small passage for the aliment. Along this contracted part the mesentery was firm and thick. After this the intestine became of a natural enough form.

CASE 28. A woman, aged 31, was seized with violent colic after having been for eight days in a state of constipation. The colicky pain was seated between the umbilicus and sternum, and the patient experienced violent pain likewise in the region of the kidneys. As injections brought away only a small quantity of blackish and hard substances, and as she made fruitless efforts to vomit, an emetic was administered which brought on copious vomiting of bile and very fetid matter, in the course of which two round worms, each half a foot in length, were discharged; the vomiting was attended with temporary relief. After three doses of the emetic, the vomiting assumed a feculent character. From the fourth day the enemata employed began to detach a large quantity of matters, and it appeared that the intestinal canal had become free, but the pain between the umbilicus and sternum always remained. The injections continued to bring away copious dejections till the fifteenth day, when the patient experienced a natural call to stool, and discharged a portion of intestine at least 14 inches in length, and entire in its circumference. She felt much relieved, there remaining only a dull pain. She recovered so much that by the end of the second month she was able to work in the fields, and considered herself perfectly cured. Notwithstanding remonstrances, she indulged her appetite, which was voracious, and one evening, after having eat a large dinner, on going to stool and making an effort to evacuate the bowels, she experienced a pain in the kidneys, as if a knife had been plunged into her. From that moment the pain continually increased, and she died two days afterwards, in intense agony, having been delivered of a child, of from four to five months, two hours before her death.

On dissection, there was found effused into the abdomen a quantity of peas and beans, of which the meal above alluded to had consisted, and a large quantity of very fetid water. On separating the intestines, the middle part of the mesentery was found very black, and the two ends of the intestine, from which the portion passed by the patient two months before her death had been detached, were gangrenous and disjointed. The contents of the intestines could be pressed through these separated ends, and the fingers introduced through them into the intestinal tube. All the adjacent parts were gangrenous.

CASE 29. A boy, $13\frac{1}{2}$ years of age, was attacked with bilious colic. During the first four days, he suffered severe and incessant pains, but his pulse remained undisturbed. On the fifth day, fever came on, and continued with an interval of a day or two, to the thirteenth. At the commencement of the illness, there was frequent and copious vomiting, and the belly was hard and constipated. On the fourth, the belly was opened, and the

vomiting ceased, after a great quantity of yellowish matters and a number of worms had been discharged both upwards and downwards. These evacuations on each occasion brought relief, but the pains and swelling of the belly did not cease till the fourteenth. On the sixteenth, without any suffering, he passed a substance, which on examination was found to be a portion of the small intestines; and from its numerous valvulæ it was concluded to be a portion of the jejunum. The boy regained his strength, flesh, and colour, so as to be able to work every day with his father, a tailor by profession. One day, about two months after the discharge of the portion of bowel, he was suddenly seized while at work, about five o'clock in the evening, with pains, borborygmi, and most violent vomiting, and died about midnight.

On dissection, the abdomen was found distended with air, and containing a small quantity of watery fluid mixed with some portions of feces. A number of livid spots were scattered over the omentum. A portion of the ileum was detached from its mesentery, and there existed in it an aperture two inches in length, from which the watery fluid and feces had escaped. The fold of intestine in which the aperture was observed, appeared at one part very thin, and much dilated, so as to form a sac, and might have been supposed to consist of the external coat of the intestine alone.

The unexpected death was attributed to the kind of diet of which the boy was obliged to make use, consisting of polenta and beans, and of which on the last day of his life he had eaten to great excess. The gas produced by his food, it was conceived, by gradually dilating the pseudo-membranous sac which had united the two extremities of the separated portion of bowel, had finally produced its rupture.

CASE 30. A woman, aged 30, was seized without any known cause, with all the symptoms of *ileus*. For fifteen days she suffered excruciating pains, at the end of which time she had a copious evacuation from the bowels. A portion of intestine was found in the feces, and the woman soon after recovered her health, and returned to her usual country labours. The portion of intestine proved on examination to be a part of the ileum with the adhering mesentery, three feet in length, of a black colour, but not affected with sphacelus. Its structure was not changed; its parietes were tolerably firm; but the villous coat, the blackest of all, seemed to be corroded in many places, so as to bring the cellular texture placed between it and the muscular coat conspicuously into sight. The extremities of the portion discharged were torn very obliquely; and consequently the cavity of the intestine could be easily inspected without making any cut into it. The intestine might easily have been distended with air, if there had not existed in it a

single fissure six lines in length. The mesentery was of a white colour. More than three months after the discharge of the portion of intestine, this woman was again seized with the same symptoms, in consequence, as was conceived, of indigestion, and died in a few hours.

On dissection, the small intestine was found torn across towards the left umbilical region. Feces, with the stones and stalks of cherries, had escaped into the cavity of the abdomen. The rupture was in the ileum. A little above it, the diameter of the intestine was three inches and two lines, and the parietes were three-fourths of a line in thickness. The upper portion of the intestine was cut up longitudinally for thirteen inches, and on attentive examination of its torn extremity, there were observed, 1st, preternatural adhesions of the mesentery to that extremity; 2d, a ring where it was thought the portion of intestine expelled by stool had been separated from the rest of the intestinal tube; 3d, shreds of membranes produced by the last fatal rupture. The inferior portion of the intestinal tube having been cut up to the extent of fifteen inches, to a point near the cœcum, was found to differ from the upper portion in its coats being thinner and its parietes more flaccid. Its upper extremity, and the mode of its union with the upper portion, were particularly deserving of attention, exhibiting a mouth of an irregular form, and rough with shreds of membranes, but no thick ring.

Although in this case, observes the narrator, the two extremities of the intestine, which by their junction had preserved the continuity of the intestinal tube, were found after death separated from one another, yet we may easily conceive the state of parts previous to the last rupture. The parietes of the intestine, as has been said, were much thickened near the place of rupture, whence we may conclude that the intestine was contracted at that part, seeing that thickening or hypertrophy is never found in these organs combined with dilatation. If this were the case in the present instance, the cause of the last rupture is to be found in the large quantity of food taken by the patient. Where the ring was observed, the tube was most narrowed; in that place probably the separation of the portion of intestine, which was seized with gangrene and expelled by stool, took place. The ruptured extremities had been joined by a ring, from which the lower and less adherent portion had been torn off by the motions produced by the food in its passage through the alimentary canal.

CASE 31. A lad, aged 12, was attacked with pain in the umbilical region. When seen on the second day he was affected with sickness, vomiting, severe pain extending over the abdomen, a

dry brown tongue ; the skin was extremely hot, and the pulse corded, hard and small, making 120 beats in the minute. On the fourth day, when he appeared much exhausted, and his death was expected, a considerable quantity of feculent matters, mixed with blood, was discharged *per anum*. From this time the bowels were easily acted on by the mildest laxatives, the sickness left him, the pulse became less frequent, and his pain inconsiderable. On the eighth day a portion of bowel was voided with a common alvine evacuation. It was fifteen or eighteen inches long, and proved to be a part of the ileum. From this time his convalescence was regular and rapid ; but he complained of pain in attempting to assume an erect position, and was obliged to keep himself bent forward for three or four weeks, at which time he had regained his health ; the bowels being regular but rather relaxed.

About twelve weeks after his complete recovery, he was attacked with typhus fever, of which he died a fortnight after the seizure.

On dissection the traces of the diseased bowel were visible by a considerable puckering and contraction where the slough had taken place, and the parts had united ; yet there did appear sufficient room for the feces to pass, and but for the febrile attack he might have enjoyed ordinary health.

CASE 32.—A woman, aged 60, was attacked with inflammatory colic, which appeared to yield to the remedies employed. The laxatives administered operated gently. On going to stool some days afterwards, she felt a longish body passing out of the rectum, which she believed to be a portion of tape-worm. Alarm having been excited, a surgeon was called, who, finding that this substance did not come away when gently pulled, cut it through near the anus. The portion thus removed was about a quarter of a French ell in length. The same night a second portion was expelled by the natural efforts.

Previous to this occurrence, the patient had appeared to be in a state of convalescence, and it did not seem to be followed by any injurious consequence. She no longer suffered any pains in the abdomen, and no symptom remained beyond slight tenderness in the middle of the umbilical region, when she bent her body forwards. The functions of the abdomen were performed with tolerable regularity. It was easy to move it by emollient injections when tardy, or to quiet by some anodyne draught the slight colicky pains, which occasionally returned.

The appetite of the patient being keen, she did not comply with the regulations respecting diet enjoined by her attendants. Somewhat more than two months before her death, she had a rather violent attack of indigestion, brought on by the kind of food she used, which lasted several days ; and it was of a similar attack that she ultimately died,—an interval of nearly five

months having elapsed between the commencement of her illness and the day of her death. A few hours before her death, she felt in the belly a motion accompanied by a slight noise, as if some body had fallen from the umbilical region into the lower part of the abdomen.

The first portion of intestine that was discharged formed a cylindrical tube, uneven at one of its extremities ; but entire and without solution of continuity in its circumference. It was livid and even blackish at some parts. On being opened the *valvulæ conniventes* were evident, shewing it to be a part of the jejunum, though more dilated than that portion of the small intestine usually is. The second portion was somewhat longer, and had a piece of mesentery attached to it. On its internal surface, the *valvulæ conniventes* were still more conspicuous than in the first portion.

On inspection of the body after death, the omentum was found in a state of inflammation, firmer in its consistence than natural, and very thick throughout its whole extent. In the cavity of the abdomen, particularly in the pelvis, there was a considerable effusion of gray-coloured matter of purulent appearance. On raising the omentum, several short membranous bands were observed on the surface of the jejunum, one three fingers-breadth in length, attached by both ends to points of that intestine at the distance of several hands-breadth from one another, the others attached by one extremity only. About the middle of the umbilical region, and a little to the right side, was found an interruption in the intestinal canal. The upper portion terminated in a cone, the point of which was very narrow ; whilst the extremity of the lower portion had the form of a round *cul-de-sac*. The space between these two portions was only a few lines in length. This division of the intestinal canal was not continued into the corresponding part of the mesentery which appeared in its natural state. All that part of the canal situated above the point of interruption, comprehending the largest portion of the jejunum, was considerably dilated, whilst the lower part of the small intestines, comprising the ileum, was reduced to a third of its diameter, throughout the most part of its extent.

The conical extremity of the upper portion of intestine was hollow and perforated at its point, by an irregular fringed aperture, through which air, blown into the intestine, passed into the abdomen. Within the lower portion there was found an intus-suscepted piece of intestine, five finger-breadths in length, inverted, and adhering throughout almost its whole length to the internal surface of the containing portion of intestine, along the line of the attachment of the latter to the mesentery. The cavity of this inverted portion was obliterated ; and the great number of *valvulae conniventes*, crowded together upon its surface, seemed to show that it had been originally of

considerably greater length than its present puckered and contracted condition indicated. It terminated inferiorly in a kind of nipple, obviously a cicatrix resulting from the separation of an adjacent part. At the root of its attachment to the fold of intestine within which it was contained, was perceived the opening of a canal, which, permeating the containing fold, terminated at a membranous groove that lay on the part of the mesentery corresponding to the space between the two ends of the divided intestine. This groove, which was about six lines in extent, seemed to be the continuation of the conical extremity of the upper portion. Loose shreds of membrane were observed along its borders, and every thing seemed to prove that this furrow had formed part of a canal of communication between the two ends of the divided intestine, which had been torn through in consequence of its insufficiency for giving passage to the large quantity of alimentary matters which reached this portion of the canal, and of the thinness of its parietes.

CASE 33.—“ No. 63. Portion of small intestine, to the extent of nearly three feet, which was discharged in a gangrenous state from the anus. It is presumed that there had been an intus-susception of this portion of intestine.

“ No. 64. The cœcum and a portion of the ileum connected with it, from the same individual as the preceding specimen. The cœcum is opened to show the condition of its mucous membrane, which is extensively ulcerated. Portions of it hang in shreds in the cavity of the intestine. The ileum is opened to show the adhesion of its extremity to the cœcum, and there is a continuity of surface between the inner membrane of the ileum and of the cœcum.

“ In the individual from whom the two preceding specimens were taken, a large portion of the ileum having been discharged in a gangrenous state, the remaining part of it has become adherent to the cœcum. In this way the continuity of the intestine is preserved.” *

CASE 34.—A woman, about the middle period of life, had been for some time labouring under a constipation of the bowels. Her medical attendant, on the second day of his visiting her, had his attention directed to a slight protrusion which had taken place *per anum*. From the appearance which it presented on a superficial examination, he was induced to think it was a portion of the rectum, and as no particular swelling of the parts had as yet supervened, the tumour was readily returned.

The constipation, however, continued, and within a day or two she was seized with severe symptoms of peritoneal inflammation; there was pain over the abdomen, accompanied with a

* Is this the case of which there is the following notice in Mr Abernethy's Lectures? (Lancet, xi. 565.) “ There was a woman in this Hospital in whom the intus-suscepted portion perished and came away, and yet she had natural stools afterwards; but she died.”

continual state of nausea and sickness, so that every kind of nourishment that was taken was instantly rejected. About this time the protrusion recurred, and to a greater extent than at the former period. This induced the surgeon more minutely to examine the condition of the parts, for which purpose he very gently withdrew a small portion, and finding it yield very readily, he continued in this manner gradually to withdraw the gut, until one yard and three inches of intestine were brought away. The violent and distressing symptoms which had previously harassed the patient now in a great measure subsided; still, however, pain was complained of in the abdominal region, and there was an occasional recurrence of nausea and sickness. A dose of castor oil having been given the bowels acted for the first time since the commencement of the attack. The evacuation presented the appearance of a natural and healthy secretion. In a very short time the nausea and sickness subsided. The patient went on progressively improving to the eighth day, at which time the bowels had acted three or four times, and the general state of the patient was such as to induce a favourable prognosis of the case to be given. But at the moment when the patient appeared to be going on favourably, life ceased.

On examination of the body, it was found that the detached intestine was a portion of the ileum, which had become intussuscepted within the colon. An inflammatory action had taken place about the *caput coli*, which had occasioned a secretion of coagulable lymph, thus completely agglutinating the two portions of intestine together, and from this agglutinated part had the separated portion of intestine been detached. The ileo-colic valve was entire. The mucous coat of the transverse arch of the colon was found to be in an inflamed state, and in two or three places small ulcerated spots were discoverable. The peritoneum was also inflamed, but not in a very remarkable degree. On the portion of gut which had been removed, the *valvulae conniventes* were very apparent, being more numerous towards that portion which was nearer the jejunum.

CASE 35.—A man, aged 40, strong, well-formed, and plethoric, complained (30th May) of pain in the left inguinal region of the abdomen, which increased every hour, and was accompanied by such severe constriction in the præcordial region, as scarcely allowed the patient to breathe. These symptoms were accompanied by obstinate constipation with continual efforts to vomit, the patient bringing up not only the food which he had recently taken, but also feculent matter. The patient had the day before eat a large quantity of raw peas, and drank a large allowance of strong wine. On the third day of the disease the nausea and vomiting continued, and the patient was very restless. On the fourth the vomiting was less frequent, but the pains

very severe. Up to the seventh day, the pains and tension of the belly constantly increased, and no evacuation took place. At that time the pains suddenly ceased, and the patient appeared in the greatest danger. The meteorismus and other symptoms of the disease continued till the fourteenth day. Soon after the administration of a quantity of quicksilver, a portion of it was discharged by stool with a quantity of feculent matter, and at the same time a piece of the intestinal canal, bearing marks of sphacelus, and two spans in length, was discharged. On this the patient improved remarkably, and at length almost entirely recovered his health; but after an interval of two years and two months, he was attacked with *synocha maligna verminosa*, of which he died on the ninth day.

On examining the body after death, it was found that the discharged portion of the bowel had been separated from the ileum, the extremity of which had united with the cœcum.

After this detail of individual cases, I shall now endeavour to state shortly some of the more general conclusions which seem deducible from them.

1. *Influence of Sex on frequency of occurrence and on mortality.*—Of the 35 cases above described, there is only one (33) in which the sex of the patient is not mentioned. Of the remaining 34, there occurred in males, 20, in females, 14. Of the 20 males, 13 are included in the first series, (1, 2, 3, 4, 5, 7, 8, 9, 11, 12, 14, 15, 16,) and 7 in the second and third, (17, 18, 25, 27, 29, 31, 35.) Of the 14 females, 3 are included in the first series, (6, 10, 13,) and 11 in the second and third, (19, 20, 21, 22, 23, 24, 26, 28, 30, 32, 34.) From this statement it is obvious that, in respect of frequency of occurrence, the proportion has been greater among males; but in respect of mortality, it has been greater among females.

2. *Influence of Age on frequency of occurrence and on mortality.*—There are five cases in which the age is not marked, (3, 11, 12, 33, 34.) In one of these, however, (12,) the patient is said to have been young, and in another (34,) of middle age. Of the remaining 30 cases, 7 were under fifteen years of age, (6, 14, 15, 18, 27, 29, 31;) 7 between sixteen and thirty, (4, 9, 16, 17, 19, 21, 30;) 12 between thirty-one and fifty, (1, 2, 5, 7, 8, 10, 20, 23, 25, 26, 28, 35;) and 4 above fifty, (13, 22, 24, 32,) so that the number under thirty years of age was 14; and the number above that age 16. Of the 14 cases under thirty years, 6 belong to the first series, and 8 to the second and third. Of the 16 cases above thirty, 7 belong to the first series, and 9 to the second and third. The proportion of mortality, therefore, does not seem to have been much influenced by age.

3. *Relations of Age and Sex, in respect of frequency of occurrence.*—Of the 14 cases under thirty years of age, the pa-

tients in 10 were males, and in 4 females. Of the 16 cases above thirty, 7 were males, and 9 females. The proportion of males, therefore, was larger under thirty, than of females larger above that age.

4. *Portion of intestine discharged.*—In three of the 35 cases, no opinion is expressed as to the part of the intestinal canal from which the discharged portion had been detached (12, 15, 28.) Of the remaining 32 cases, it seems in 22 to have consisted exclusively of small intestine; in 3 partly of small and partly of large intestine, and in the remaining 7 of large intestine alone. Of the 22 cases in which the discharged portion of bowel consisted exclusively of small intestine, in 3 it seemed to be a portion of the jejunum, (2, 29, 32,) in 3 to be derived partly from the jejunum and partly from the ileum, (17, 19, 24,) in 11, wholly from the ileum, (5, 7, 10, 22, 23, 27, 30, 31, 33, 34, 35) and in 5 the particular portion of small intestine from which it had been separated is not marked (4, 8, 13, 16, 18.) Of the 3 cases in which the intestinal *sequestrum* (if I may be allowed the expression) consisted partly of small and partly of large intestine, in one it was constituted by the lower extremity of the ileum and the cœcum (1,) in the others, by the same parts with the addition of a portion of colon (14, 25.) Of the 7 cases in which it consisted wholly of large intestine, in 1 the cœcum, (9,) in 3 the cœcum with a portion of colon, (6, 21, 26,) in 2 a portion of colon (3, 20,) constituted the sequestrum, and in one the particular part of the large intestine is not marked (11.)

5. *Length of the discharged portion of intestine, and other circumstances relative to it.*—In respect of length, there seems to have been every variety from six to forty inches, and there does not appear to have been any relation between the length of the discharged portion and the part of the canal from which it came. In almost all the cases the intestinal sequestrum came away in a single piece. In one case (9) it is said to have been discharged in fragments. In another case (16) there were two portions of unequal length, the first measuring twenty, and the second six inches, discharged at the interval of a day. In a few cases, (8, 16, 25,) it is said that subsequently to the discharge of the principal portion, shreds of intestine, or something resembling them, were discharged. In almost all the cases it is mentioned that a piece of mesentery or mesocolon was attached to the discharged portion of intestine; in one (7) a mesenteric gland can be seen in the preparation; and in a few a piece of omentum seems to have adhered to it. Though an invaginated portion of intestine necessarily consists of at least two plies, there are only two cases in which it is mentioned that the discharged portion was in any degree double. In one of these (12) it exhibited marks of partial inversion. In the other (16) it is stated to have been inverted. In all the others it would ap-

pear that the duplicature was undone, during the passage of the portion of bowel through the intestinal tube.

6. *Symptoms manifesting themselves previously to the discharge of the portion of bowel.*—In most of the cases the symptoms were those of ileus, but in two, at least, of diarrhœa, (2, 26,) and in one of dysentery (16.) In a large proportion of them vomiting occurred, and in more than a third of these it is mentioned that the matters ejected from the stomach were at some period of the disease stercoraceous, (3, 4, 6, 8, 13, 15, 18, 21, 23, 24, 28, 35.) In several cases worms were brought up by vomiting; in some of these it is mentioned that the vomiting was at the same time stercoraceous, (8, 28,) whilst in others (9, 19, 29,) no allusion is made to the matters vomited having been of this nature.

In the cases in which the symptoms assumed the character of ileus, there occurred, in the first place, a state of constipation, which varied considerably in its duration. In most of these cases the bowels became open a longer or shorter time previously to the discharge of the separated portion of intestine. In some instances, however, it would appear that the bowels continued constipated till the portion of intestine was discharged (5, 6, 23.) In the cases in which the symptoms were those of diarrhœa, no period of constipation is stated to have occurred during the progress of the disease. In the case of dysentery, it is mentioned that the stools became scanty, in fact *nearly* suppressed. In these cases are we to conceive that the alimentary canal remained sufficiently open at the point of intus-susception to allow of the propulsion of its contents through it; or that the dejections consisted of matters previously contained in the portion of the intestinal tube beneath the seat of the invagination, or subsequently secreted from its inner surface?

The matters discharged during that open state of the bowels which in most instances preceded the discharge of the separated portion of intestine, seem to have varied much in their character, according to the proportions in which proper excrementitious matters, mucus, sanies, and blood, were mixed together. In some cases it does not appear that any discharge of blood was noticed, whilst in others pure blood was passed in considerable quantity (17, 20.) There is no mention made, in any of the cases, of constipation having recurred after the bowels had become loose, with one exception (Case 1) in which the separated portion of intestine seems to have acted as a plug.

7. *Causes of the illness during which the portion of bowel was discharged.*—In many, or rather most of the cases, no cause could be assigned. In some the affection succeeded to external injury, (1, 5, 8? 27;) in one to the employment of a considerable degree of force in the reduction of an umbilical hernia (24.) In a few cases it is mentioned that the patient had

been of a costive habit; and in a few a prejudicial influence is ascribed to the kind of diet.

8. *Interval elapsing between the commencement of the illness and the discharge of the portion of bowel.*—There does not appear to have been any general correspondence, in the different cases, in respect to the length of this interval. In one case, the discharge of the portion of bowel occurred on the sixth day of the illness (6;) in four, on the seventh or eighth (13, 21, 26, 31.) In considerably the greater proportion of cases it occurred within thirty days. In one, the interval is said to have extended to more than a month (2;) in another, to have been of forty days' duration (9;) and in one case, (27,) in which the illness was attributed to external violence, more than a year intervened between the reception of the injury and the discharge of the portion of bowel.

9. *Interval, in those cases which proved fatal, between the discharge of the portion of bowel and the occurrence of death.*—This interval, also, was very various in its duration. In one case, it extended to only a few hours (17;) in another, to six days (21;) in other single cases to thirteen, nineteen, twenty-one, and twenty-nine days; in a considerable portion to from six weeks to two months (18, 19, 24, 26, 27, 28, 29;) and in some to from three to five months (30, 31, 32.)

10. *Causes of death in the cases which had a fatal issue.*—In some of these cases the occurrence of death seems to have been dependent upon or connected with the injury sustained by the intestinal canal, or the inflammatory affection by which this injury was itself produced. In others, the fatal issue seems to have been occasioned by changes occurring in the intestinal canal, after a more or less complete natural cure had taken place; whilst in a few it was attributable to a cause nowise connected, to all appearance, with the injury which the intestinal canal had sustained.

The cases in which death seemed to be attributable to changes taking place in the alimentary canal, subsequently to the repair of the primary injury, are five in number. In four of these, the attack seemed to be induced by indigestion (18, 28, 30, 32;) in the other (26) by over-exertion. The cases in which the fatal issue seemed attributable to a cause independent of the affection of the intestinal canal appear to be three in number. In one of these (19) dropsy supervened; in another (31) the patient was seized with typhous fever, about sixteen weeks after the discharge of the portion of bowel; and in the third (35) the patient died after an interval of more than two years, of an attack of malignant fever. Abstracting these eight cases, therefore, there remain eleven in which the death seems to have depended on the primary disease (17, 20, 21, 22, 23, 24, 25, 27, 29, 33, 34.)

11. *Appearances found on the examination of the bodies of those who died.*—In endeavouring to bring together into a general view the results of dissection in the fifteen cases in which this was performed, we may turn our attention, in the first place, to the state of the intestinal tube, as regards the repair of the solution of continuity that had occurred, and the establishment of a pervious passage for the contents of the bowels.

In one case (33) all that is stated respecting these points is, that there was continuity of surface between the inner membrane of the two parts of intestine which had been brought into apposition. In another (24) in which the union seems to have been very complete, the cavity of the intestine was not sensibly contracted, notwithstanding the formation of strong adhesions between the point of union and the peritoneum. In another (31) there was considerable puckering and contraction at the place of union, but sufficient room was left for the passage of the feces. In another (27) the intestine was contracted at one part, and the contracted part was much thicker and harder than any other, so as to leave a very small passage. In another (22) there was stricture at the place of union to such an extent as only to admit the passage of the little finger with difficulty. In one case (25) the union is said to have been very firm, but at the point of junction there was situated a small abscess, which communicated by a sinus with an abscess on the psoas muscle. In one case (23) the continuity of the intestinal canal was produced, not by the union of the two extremities from between which the discharged portion of intestine had sloughed off, but by the upper extremity opening into a pouch connected with the lower portion of intestine, at a considerable distance from the place where the separation had occurred, the mouth of the lower portion having become closed up by adhesive inflammation. In another case (26) so far as can be gathered from the imperfect account given of the dissection, the upper portion of intestine was invaginated to a considerable extent in the lower portion, through one of two apertures which existed in it.

In four cases there was found to exist a communication between the cavity of the intestinal tube and the general cavity of the abdomen. In one of these (28) the intestinal extremities, after having been united, seemed to have been again disjoined by gangrenous inflammation. In another (30) the united ends were similarly disjoined, but the separation seems to have been attributable to laceration rather than to diseased action. In this case there was a thick ring at the point of union, which is supposed to have narrowed the passage. In another case (29) no separation of the united ends had occurred, but a rupture had taken place in what the narrator seems to have supposed to be a pseudo-membranous pouch which lay between and connected them. In another (32) in which the communication

had from the first been very imperfect, and in which it would appear that only one of the two folds of invaginated intestine had been detached by the process of disjunctive absorption,—the other fold, or a portion of it, having been found adhering to the inner surface of the intestinal canal,—an aperture and rent was found in the very narrow tube by which the two portions of intestine were connected. In this very singular case, the aperture of communication in the lower portion of intestine was at the angle formed by the invaginated and the containing portion of intestine.

In the next place, we have to consider the state of the abdominal viscera in other parts. In one case (23) almost the whole of the small intestines had coalesced along with the omentum into one mass. In another (27) the folds of the intestines and omentum were all glued together by a fatty curdy matter. In one (26) an adhesion of the omentum prevented the escape of feces into the cavity of the abdomen through an opening existing in the colon. In one case (21) the abdomen was filled with fetid purulent serum, and unfortunately this was the only circumstance connected with the state of the parts which was ascertained. In another case (32) the omentum was inflamed, firmer in consistence than natural, and very thick. The cavity of the abdomen, particularly the pelvis, contained a considerable quantity of grayish puriform fluid. In several cases there were found marks of gangrene in the course of the intestinal tube at a greater or less distance from the place at which the disjunction of the discharged portion had occurred. In one (22) many different parts had a livid and almost gangrenous appearance, yet admitted of being distended with air. In a second (24) the intestines were gangrenous at different points at a considerable distance from the place of union. In another (28) besides the united extremities having been disjoined by gangrene, all the adjacent parts were gangrenous, and the middle part of the mesentery very black.

12. *Circumstances deserving of attention, relative to the persons who experienced a recovery of some duration.*—A very singular feature in the history of many of the cases that have been related is the rapidity with which the patients have been restored to apparent health. In many of them, as has been seen, a very short space of time has elapsed between the discharge of the portion of bowel and the return of the individual to active exercise. The appetite, too, seems in many instances to have been very keen during the progress of recovery, and in some of those which ultimately proved fatal, as has been already remarked, death seems to have been occasioned by its too free indulgence, and particularly by the employment of unsuitable diet. The knowledge of these facts suggests important cautions as to the measures which ought to be enforced even in the cases of this kind in which there seems least room for apprehension.